Part III. AGRICULTURAL APPRAISAL PROCESS

Rural land's market value is typically the cash or cash equivalent price at which land would sell from a willing seller to a willing buyer in an arm's-length transaction. Three different factors influence land's value:

Production. Buyers and sellers in the production market are interested in the land's ability to produce agricultural income.

Investment. Buyers and sellers in the investment market are primarily interested in land's potential appreciation in value. A buyer purchases the land in order to resell or develop it.

Consumption. Those in the consumption market are primarily interested in the satisfaction of owning land. A buyer purchases the land for a weekend home, for a hobby farm, or simply for the pride of ownership.

The price land could command in any or all of these markets influences its market value. The agricultural use value of land arises only from its agricultural production.

In estimating productivity value, the appraiser considers only those factors associated with the land's capacity to produce marketable agricultural products. The appraiser ignores the possibility that the land may command a higher price on the investment or consumption market. Neither of these market influences can be considered.

A market value appraisal of rural land might consider all three approaches to value—cost, market, and income. A productivity appraisal, however, uses only a modified income approach and converts an estimate of the property's income into an estimate of the property's value. The appraiser first estimates the property's annual income, then divides the income by a capitalization rate. The result is an estimate of the property's value.

Full income-approach appraisal can be considerably more complicated than this description, but in productivity appraisal the process is relatively simple because the law sets the capitalization rate and the procedure for projecting income.

By law, the capitalization rate is the greater of 10 percent or the interest rate specified by the Federal Land Bank of Houston plus 2 1/2 percentage points. The capitalization rate is published in **STATEMENT** (the SPTB's monthly news and information bulletin) and provided to the appraisal districts as part of the agricultural information the SPTB distributes each year.

The law requires the appraiser to base the annual income estimate on the five-year period preceding the year before the year of the appraisal. For example, an appraisal in 1988 was based on income from 1986 (two years before the appraisal), 1985, 1984, 1983, and 1982.

The appraiser determines the net income the land would have generated under an average owner of ordinary prudence during each year of the five-year period. The appraiser then averages the annual net income for each of these years. The resulting average, or "net to land," is the amount capitalized in the appraisal.

From a practical standpoint, tax appraisers cannot appraise each individual tract of land. Instead, the appraisal office must develop a system of appraisal that allows the office to value a large number of tracts. To put an effective productivity appraisal system into action, the appraiser must complete five steps:

1. Develop a land classification system. Such a system groups land into principal types of agricultural uses.

In most instances, such a system will recognize at least seven broad agricultural use classes:

(a) Irrigated cropland
(b) Dryland cropland
(c) Orchard
(d) Improved pastureland
(e) Native pastureland
(f) Waste land
(g) Other land.

Not all counties will have all classes. Some counties may need to add classes. Districts might, for example, need to develop a class for unusual or intensive land uses such as truck farming, egg producing, or commercial poultry production. In many cases, the chief appraiser will need to split broad classes into sub-classes.

2. Estimate the net to land per acre for each class or sub-class. This annual income is based upon the five-year period preceding the year before the appraisal.

3. Divide the class' net to land by the year's capitalization rate to find the value per acre in each class. These values form a productivity appraisal schedule.

4. Classify all qualified agricultural land according to the land classification system.

5. Use the schedule to calculate the productivity value of individual parcels of land. Typically, the productivity value schedule will show a value per acre for each land class. For any given parcel of land, the number of acres times the per acre value determines the agricultural use value.

In addition, the law requires the chief appraiser to estimate and record the market value of property appraised under 1-d and 1-d-1. Thus, the system must also provide for a market value appraisal according to generally accepted methods. The Rural Land section of the *General Appraisal Manual* describes market value appraisal methods for rural land.

SOURCES OF INFORMATION

The chief appraiser is solely responsible for establishing the land classes and determining the average annual "net to land" for each class. To do so, he needs to obtain certain information from state and federal agencies. The following sources can provide information on which to base these determinations, but the chief appraiser bears ultimate responsibility for the land classes and the net to land estimates.

Agricultural Advisory Board

One of the chief appraiser's most important sources of information is the appraisal district's agricultural advisory committee. The committee's purpose is to advise the chief appraiser on the appraisal and use of agricultural land. The chief appraiser is required to appoint, with the advice and consent of the board of directors, an agricultural advisory committee composed of at least three members. Appraisal district employees, appraisal review board members, and members of the board of directors of the appraisal district are ineligible to serve on the committee.

The code requires the advisory committee to meet at least three times per year. Committee members are not entitled to compensation.

One of the three committee members must be a representative of the agricultural

stabilization and conservation service in the county in which the appraisal district is located. The other two members must have been residents of the appraisal district for at least five years and must own property in the appraisal district that is qualified for 1-d, 1-d-1, or 1-d-1 timber appraisal.

Board members serve staggered terms of two years. In making the first round of appointments, the chief appraiser should appoint half the members for one year and half the members for two years. If the committee has an odd number of members, one fewer than a majority of the initial membership should be appointed for one year terms.

The Texas Agricultural Extension Service

Local county extension agents have information on the typical crops in each county, typical yields, production practices, general price, and lease and production cost information.

The Extension Service develops regional budgets for crop and livestock production. These budgets may be helpful in developing the average net to land, but they are general in nature. They may apply to several counties, are projected rather than historical, and are not designed for calculating net to land values. This information is simply another source of data, not the sole basis for net income calculations.

Agricultural Stabilization and Conservation Service (ASCS)

Local ASCS committee members and ASCS staff members have information on crops and crop yields typical for the area. Information on commodity prices, production practices, and government payments is also available from this source.

Soil Conservation Service (SCS)

The SCS has comprehensive information related to the productive capacity of soils. This information is helpful in establishing land classes and sub-classes. In most counties, the SCS can provide detailed soil surveys that will also assist in classifying individual parcels of land. SCS personnel are familiar with typical crops, yields, carrying capacities for livestock, production practices, and typical lease arrangements.

Texas Agricultural Statistical Service

The Texas Agricultural Statistical Service sometimes has publications containing specific information for each county on the number of acres planted and harvested for each crop and on average county yields.

The service computes the average yield per acre, per crop. Its numbers do not break out yields received from richer or poorer land, nor do they reflect other variations that influence yields, such as the level of water application on irrigated lands. Since appraisers must estimate yields based on a prudent, typical operation, they will generally need to supplement the service's estimates with further information.

Information on prices paid for various commodities on a regional or state-wide basis is also available. Again, this information should only be used if the values it shows are typical for the specific area.

Farmers Home Administration (FmHA)

The FmHA is a government agency in the U.S. Department of Agriculture. The local FmHA committees consist of three members, of whom at least two must be farmers. Information on crop yields, production practices, and leasing rates should be available from this committee.

Production Credit Association

Production Credit Associations generally serve fairly large areas but may have information for specific counties. They can provide information about crop yields, production practices, and leasing rates.

Universities and Colleges

Local college and university agriculture departments often have information not available from the above sources.

In addition, the State Property Tax Board distributes an information packet every year containing information about agricultural costs, prices, and yields.

Local agricultural suppliers and producers have information useful to the appraiser. Local lenders who make agricultural loans may also be willing to furnish information useful in determining net to land. The appraiser should also meet with the county U.S.D.A. Rural Development Committee, which includes representatives of the U.S.D.A. agencies operating in the county, to obtain other needed information.

ESTABLISHING LAND CLASSES

Land classes should be based on the district's most common land uses. The Property Tax Code lists some typical classes of land, such as irrigated cropland, dry cropland, improved pasture, native pasture, orchard, and waste. Unusual or intensive land uses such as truck farming, egg producing, or mass-producing poultry may also require a separate land class. (Although the Code refers to land "categories," this manual follows common usage and designates them land "classes.")

Appraisers must often divide broad classes into sub-classes based on factors that influence productive capacity. A particular land class may include land with different soil types, soil capacity, levels of irrigation, topography, or geographical factors. These differences may affect productivity enough to define sub-classes.

For record-keeping and ease of identification, the simplest way to name each sub-class is to attach a number or letter to the class name. For example, if the class is Irrigated Cropland, and there are four sub-classes based on differences in soil types, each different soil type could be designated as Irrigated Cropland I, Irrigated Cropland II, etc.

From a practical standpoint, appraisal districts cannot develop a classification system that reflects all minor differences in productivity. Appraisers should therefore use common sense in subdividing classes. A few acres of land devoted to a specific use will not define a

Section 23.51(3)-(5), Property Tax Code. Definitions.

(3) "Category" means the value classification of land considering the agricultural use to which the land is principally devoted. Categories of land include but are not limited to irrigated cropland, dry cropland, improved pasture, native pasture, orchard, and waste and may be further divided according to soil type, soil capability, irrigation, general topography, geographical factors, and other factors which influence the productive capacity of the category. The chief appraiser shall obtain information from the Texas Agricultural Extension Service, Soil Conservation Service, and other recognized agricultural sources for the purposes of determining the categories of production existing in the appraisal district.

(4) "Net to land" means the average annual net income derived from the use of open-space land that would have been earned from the land during the five-year period preceding the year before the appraisal by an owner using ordinary prudence in the management of the land and the farm crops or livestock produced or supported on the land and, in addition, any income received from hunting or recreational leases. The chief appraiser shall calculate net to land by considering the income that would be due to the owner of the land under cash lease, share lease, or whatever lease arrangement is typical in the area for that category of land, and all expenses directly attributable to the agricultural use of the land by the owner shall be subtracted from this owner income and the results shall be used in income capitalization. In calculating net to land, a reasonable deduction shall be made for any depletion that occurs of underground water used in the agricultural operation.

(5) "Income capitalization" means the process of dividing net to land by the capitalization rate to determine the appraised value.

Section 23.53. Capitalization Rate.

The capitalization rate to be used in determining the appraised value of qualified open-space land as provided by this subchapter is 10 percent or the interest rate specified by the Federal Land Bank of Houston on December 31 of the preceding year plus 2-1/2 percentage points, whichever percentage is greater.

class or sub-class. These few acres should be placed in a more typical use-class with the same or similar productivity.

Where available, soil surveys can be extremely helpful in establishing classes and sub-classes. Surveys can reveal the major soil types. Grouping soil types to reflect a reasonable range of productive capacities will limit the number of sub-classes established.

The slope of the land often influences productivity as much as the soil type. The same soil type may have differing productive capacities under different land slope conditions. This is especially true on irrigated cropland. Appraisers must analyze factors and combine them in a classification system. For example, the system might classify a given soil type as Irrigated Cropland I if it has a Class A Slope, but Irrigated Cropland II if it has a Class B Slope.

The appraiser may base sub-classes for pastureland on typical stocking rates or carrying capacity. Some native pastureland, for example, may have a soil type that produces more feed and can support more livestock than the same native pastureland with a different soil type. As is the case with cropland, districts must establish a reasonable grouping of major differences in carrying capacities or stocking rates. The classification system cannot account for minor differences. Appendix D, page 65, demonstrates development of a classification system and values for agricultural land.

DETERMINING NET TO LAND VALUES

Net to land, remember, is the average annual net income that a class of land would be likely to have generated over the five-year base period. Until 1987, appraisers based net to land primarily on owner-operator budgets. The law now requires appraisers to determine net to land using a cash or share lease method.

Under a lease method, net to land is the rent that would be due to the property owner under a cash lease, share lease, or other typical lease arrangement, less expenses typically paid by the owner. In a cash lease, the rent is a fixed amount. In a share lease, the rent is a share of the gross receipts for the year, less a share of certain expenses.

Cash Lease Method

A cash lease (cash rent) is an agreement between landowner and tenant to lease for a fixed cash payment. This payment is usually in terms of dollars per acre for a period of one year. When the landowner leases on a cash basis, he ordinarily has no labor or operating capital costs. If the landowner has no expenses relating to the agricultural use of the land, the cash lease payment is virtually equivalent to a return to the land. If the prudent owner typically does pay some expenses, appraisers should deduct them from the lease payment to determine net to land.

Terms of Lease

The cash lease used for a specific land class should represent the payment to a prudent property owner. In some cases, the most common or typical lease agreement within an area may not be prudent for either the property owner or tenant. This situation may occur when the most common lease agreements are between family members.

The property owner's expenses typically include certain fixed costs such as property taxes, depreciation on irrigation equipment if the property owner also owns the equipment, depreciation of fences and typical structural improvements, and water depletion. Appraisers should calculate property taxes on the basis of agricultural use appraisal rather than market appraisal.

Additional Costs

The property owner also incurs a cost of management, covering such activities as finding a tenant, keeping records, and making sure that the tenant meets the contract agreement. In many cases the cost of management is insignificant when calculated on a per acre basis.

Although the "typical" cash lease landlord has few or no expenses, some leases may re-

quire him to pay additional expenses. Appraisers should adjust these leases to typical terms before using them to estimate typical net lease payments.

In summary, the net to land value is the typical cash lease rate minus the typical expenses incurred by the landowner. Appendix E, Figure 1 provides a hypothetical example of the cash lease method.

Steps in a Typical Cash Lease Approach

1. Gather cash lease rates from knowledgeable persons in the area. This data is not always readily available. Do not use leases of an unusual nature, long-term leases with options to buy, or leases between family members. Leases of this type are not considered normal arm's-length transactions and may not indicate the actual income-producing capacity of the soil.

2. Gather as many leases as possible for each year of the five-year period. In most cases, you will need at least four to six leases per year to develop a reliable net to land value for a specific land class. Typical leases will usually fall within a narrow dollar range. You must choose one value to serve as a typical lease rate for the year.

For example, assume you discover four grazing leases and four hunting leases for native pastureland. The payments are $4.50 per acre, $4.75 per acre, $4.75 per acre, and $5.00 per acre for each year, respectively. The four hunting lease rates are $3.50 per acre, $3.50 per acre, $3.50 per acre, and $3.25 per acre for each year, respectively.

You should not assume that the typical lease rate is an average of the lease rates collected. The typical lease rate is the most common or most likely lease rate. In the previous example, $8.25 per acre would appear to be typical. This lease rate is based on a $4.75 per acre grazing lease and a $3.50 per acre hunting lease.

Use the same procedure to establish a typical lease rate for each of the remaining four years of the five-year qualifying period.

If a lease provides for an unusual owner expense—such as maintaining fences—adjust the payment by subtracting that expense. Suppose, for example, that fence maintenance in one lease costs the owner 40 cents per acre, per year. The nominal lease payment is $4.75 per acre. After adjustment, the payment is $4.35 per acre.

Lease rates for grazing land are often a function of livestock carrying capacity. Appraisers measure livestock carrying capacity by the number of acres required to carry or support one animal unit. An animal unit is a standard for comparing different types of livestock that equals 1,000 pounds of live weight. A cow and its calf constitute one animal unit, as do six sheep or seven goats. When carrying capacity varies in the jurisdiction because of soils, topography, or other factors, sub-classes under the native pasture class should reflect the differences.

3. Determine typical landowner expenses. In the example above, assume that the landowner has a "cost" of 50 cents per acre per year for depreciation of fences, and 47 to 52 cents per acre per year for property taxes (based on agricultural appraisal).

Calculate the depreciation cost of fences by dividing the cost of the fences on a typical operation by their life expectancy, then dividing by the typical number of acres. Half of the cost of property line fences is attributed to the typical parcel; the other half of the cost is attributed to the land across the fences.

Again, the appraiser should determine typical expenses according to actual practice in the area. Isolated unusual expenses in a single lease (like fence maintenance) are handled by adjusting the individual lease. However, if fence maintenance appears to be a typical expense, do not adjust the individual lease rates. Instead, include the fence expense as typical and subtract it from the typical lease rate.

4. For each of the five base years, subtract the expenses from the typical lease rate. The remainder is the net to land value. Average the five net to land values for each of the five years to obtain the overall net to land value for the land class for the five-year period (See Appendix E, Figure 2). Divide this net to land value by the capitalization rate to obtain the agricultural use value for the class.

Sound net to land values for one sub-class can often be adjusted to fit other sub-classes. For example, land with a carrying capacity of one animal unit per 20 acres can support twice as many animals as land with a carrying capacity of one animal unit per 40 acres. If the an-

nual payment is $3.00 per acre for the better land, one would reasonably expect the annual payment to be $1.50, or half as much, for land that can support half the animals.

In many areas agricultural land is also leased for hunting and other recreational purposes. The calculation of net to land should include income from hunting leases in areas where native pasture and timberland are commercially leased for deer hunting or where a prudent manager would supplement his agricultural income with hunting lease income (e.g. where native pasture is also leased for hunting).

Like other lease income, hunting income should be net income. You should deduct typical owner's expenses from total income. However, items like property taxes and depreciation, or any expense attributable to both leases, should only be deducted once. Do not subtract them from both hunting and agricultural income.

Share Lease Method

Appraisers must estimate net to land values from share leases as well as cash leases. Under a share lease, the landowner (usually) pays a share of production expenses and receives a prearranged share of the gross receipts rather than a fixed dollar amount. Share leases may vary from location to location and usually vary from crop to crop.

When choosing the sample of share leases to develop a typical share-lease amount for specific land classes, appraisers should pick only leases with terms under which a prudent landowner would lease the land. Leases may vary in terms. Selecting the typical lease is a matter of judgment and careful investigation, not mathematical averaging. In some cases, the most common or typical lease agreement within an area may not be a prudent lease agreement, especially when the most common lease agreements are between family members or are not at arm's length.

For example, suppose one lease provides that an owner receives 40 percent of income, while others in the same land class provide for the owner to receive 33 percent. After investigation, the appraiser discovers that the property owner receiving the higher percentage provides his tenant with irrigation equipment that other owners do not supply. Subtracting annual depreciation and maintenance expense on the irrigation equipment from the owner's 40 percent share brings his net income down to the same 33 percent the other owners are making.

This example shows the need to analyze lease terms. The 40 percent return only seemed higher than the 33 percent return. Returns may also seem higher or lower when a lease requires the owner to pay a greater or lesser share of expenses or to pay expenses that other owners in the area do not. The appraiser must investigate the terms of the leases he chooses to rely on and use careful judgment in making his choices.

To calculate net to land for share leases, appraisers need the following information, gathered from the sources discussed on pages 20 to 22:

- **Typical crops:** Determine the principal and typical crops grown in the area for the land class under consideration.
- **Lease agreements:** Determine the typical lease agreement between property owner and tenant. What percentage of gross income and expenses does the owner share in? What types of expenses are typical? For example, in a common share lease agreement for dry land grain sorghum, the property owner receives one-third of the gross receipts and pays one-third of the fertilizer, harvest, and hauling costs (See Appendix E, Figures 3 and 4).
- **Yield estimates:** Determine the typical yield for the crops and land class being considered. Calculate the estimated yield per planted acre. If a portion of the area's crop is destroyed by a hailstorm or not harvested for some reason, the yield per acre should reflect the acres planted, not the acres harvested. Appraisers can use one of two methods to convert yield per harvested acre to yield per planted acre.

Method 1

$$\frac{\text{Harvested acres}}{\text{Planted acres}} \times \text{Yield per harvested acre} = \text{Yield per planted acre}$$

Method 2

$$\frac{\text{Total yield for all acres}}{\text{Planted acres}} = \text{Yield per planted acre}$$

- **Price estimates:** Determine the typical price farmers receive for the crops under consideration.
- **Government Programs:** Determine whether the crops being considered are typically enrolled in government support programs, such as the deficiency payment program. If they are, then any income the owner received from the programs should be included in the calculation of net to land. If government support programs are typical, you will need further details. In the deficiency payment program, this information includes typical base (five-year average yield), the government payment rate, and the amount of acreage the program requires to be set aside or idled. [NOTE: Do not use income from CRP payments. The CRP program is discussed on pages 29-30.]
- **Cost estimates:** Determine the typical variable and fixed expenses.
- **Additional income:** Determine any additional income farmers typically receive and share with the property owner. For example, this amount would include the income received from grazing cattle on wheat fields as well as any other income incidental to producing crops or raising livestock. In areas where grazing land is commonly set aside to rejuvenate the cover, adjust grazing income to reflect that fact.

After collecting and reviewing the above information, the next step is to choose a method for determining net to land. The two available methods are:

- **Five-year average lease income:** Use five-year averages of crop yields, prices, additional income, and expenses to determine typical net to land for each class.
- **Five yearly leases:** Calculate the annual net to land for each of the five years, then average them.

Because leasing practices and government farm programs change, the second method, using separate calculations for each year, is preferable.

Calculating Net Income for a Typical Share Lease

Calculating net to land for a share lease requires four steps:

1. Calculate the landowner's share of gross income.
2. Calculate the landowner's share of expenses.
3. Subtract the owner's expenses from the owner's gross income.
4. Repeat the preceding steps for the four years remaining in the base period.

The following discussion shows how to complete these steps. It uses the example of dry land grain sorghum and assumes that the owner receives one-third of gross receipts and pays one-third of the fertilizer, harvest, and hauling expenses.

The typical yield for one year in the five-year period was 2,165 pounds per acre. The typical price received on the yield was $4.35 per hundredweight (cwt.).

The typical property owner shared the following costs with his tenant: $15.00 per acre for fertilizer, $10.00 per acre for harvesting, and $.25 per cwt for hauling.

In this area, farmers typically participate in the grain sorghum deficiency payment program. During the year, the average base for government payments was 2,420 pounds per acre, with a payment rate of $.79 per cwt. The farmer had to set aside 10 percent of his land to participate. The property owner does not share in the variable expenses associated with the set-aside land but is responsible for 100 percent of the fixed costs.

Property taxes were approximately $1.75 per acre.

1. Calculate the landowner's share of gross income. Multiply the average price received times the typical yield per planted acre times the landowner's share times the percentage planted. The percentage planted takes into account the land set aside in government programs. In the example, 10 percent of the land is set aside and 90 percent planted. In our example, the gross income for the year in question would be calculated as follows:

Grain Sorghum	=	$ 4.35 per cwt	x	21.65 cwt	x	.333	x	.90	= $ 28.22
Deficiency Payment	=	$ .79 per cwt	x	24.20 cwt	x	.333	x	.90	= 5.73
Gross Income									= $ 33.95

2. Calculate the landowner's share of shared expenses. Multiply the cost per unit or acre times the number of units times the owner's share times the percentage planted.

Fertilizer	$ 15.00 peracre	x	1 acre	x	.333	x	.90 = $ 4.50
Harvest	$ 10.00 peracre	x	1 acre	x	.333	x	.90 = 3.00
Hauling	$ .25 per cwt	x	21.65 cwt per acre	x	.333	x	.90 = 1.62
Share Expenses							= $ 9.12

In addition, expenses include the property taxes (based on agricultural use appraisal). The tax was $ 1.75 per acre.

3. Subtract the owner's shares of expenses and property taxes from the owner's share of gross income. The remainder is the net to land value for the year in question.

$ 33.95 - $ 9.12 - $ 1.75 = $ 23.08

4. Repeat these three steps for each of the other four years in the five-year period.

In most cases, more than one crop is typical and prudent in an area, so appraisers must calculate more than one net to land value for each year. To develop a net to land value for a land class, you must combine the net to land values for each crop.

Appraisers combine the net to land values established for each of the crops according to the percentage of crop mix. Suppose the dry land mix was 40 percent grain sorghum, 30 percent cotton, and 30 percent wheat. The net to land value for the individual crops was $26.25 for grain sorghum, $27.59 for cotton and $19.05 for wheat. The net to land value for the class is determined by calculating a weighted average:

	Crop Mix		Crop Net to Land		Combined Net to Land
Grain Sorghum	.40	x	$26.25	=	$ 10.50
Cotton	.30	x	$27.59	=	$ 8.28
Wheat	.30	x	$19.05	=	$ 5.72
					$ 24.50

The five-year average of the annual net to land values can then be used to determine the productivity value for the land class.

Unavailable Leases–Alternative Methods

In some cases, neither share nor cash leases will be available for comparison within the immediate area. For example, fish farms and exotic game ranches are rare, and finding five to eight leases within the entire state may be difficult.

If leases are unavailable, the chief appraiser must use alternative methods to determine the amount a reasonable lessee in the area would pay to lease the land on either a cash or share basis. He may go outside the appraisal district to find the nearest comparable lease operations. Using his best judgment, the chief appraiser must decide whether he can reasonably compare these leases with operations in the district.

Appraisers must also decide whether to supplement out-of-district leases with an owner-operator budget. If no reasonably comparable leases are available, the chief appraiser may

rely entirely on the owner-operator budget method to determine what a reasonable lessee would pay to lease the land in question. Owner-operator budgets may provide the only method of estimating lease amounts for intensive or unusual agricultural operations such as truck farms or poultry farms geared toward mass production.

Appendix B on page 53 discusses the owner-operator budget method.

DEVELOPING THE APPRAISAL SCHEDULE

After calculating the average net to land values for each class and sub-class, the appraiser develops an agricultural appraisal schedule. Dividing the class net to land by the capitalization rate gives the class's agricultural use value. Using information from the previous examples, the following chart shows a typical class schedule:

Land class	Net to Land	Cap Rate	Appraisal
Irrigated Cropland I	42.00	.14	$ 300.00
Dry Cropland I	24.50	.14	175.00
Native Pasture I	4.90	.14	35.00

CLASSIFYING INDIVIDUAL PARCELS

The major problem facing the appraiser is determining the number of acres in each land class for each individual farm or ranch. This problem is especially difficult for districts that have not developed land ownership maps.

Detailed soil surveys contain maps on soils and topography characteristics. Ownership maps incorporating soil survey information provide the most accurate means of determining acreage per land class on an individual parcel. Tracing boundary lines with a planimeter gives a relatively accurate reading of acreage within the land classes.

Districts without ownership maps must develop a procedure for obtaining acreage breakdowns. The ASCS has some information on individual farms whose owners participate in governmental programs. In addition, the Soil Conservation Service has developed conservation plans for many producers and can provide such information.

In many cases it will be necessary to obtain the assistance of the landowner in determining the acreage breakdown. The chief appraiser may consider requesting additional information from an applicant, asking for the breakdown of acres in each land class.

APPRAISING INDIVIDUAL PARCELS

If Farmer A owns a section of qualifying land (640 acres) of which 160 acres are classified as Irrigated Cropland I, 300 acres are classified as Dry Cropland I, and 180 acres are classified as Native Pasture, the total agricultural value of the land would be calculated by applying the appraisal schedule, as shown on this page, to the breakdown of acres:

Land Class	Number of Acres		Ag Use Value		Total Ag Use Value
Irrigated Cropland I	160	x	$300	=	$ 48,000
Dry Cropland I	300	x	175	=	$ 52,500
Native Pasture	180	x	35	=	$ 6,300
Total	640				$ 106,800

In addition, the appraiser must estimate the market value of the land, based on accepted market appraisal techniques. The appraiser may appraise the total parcel or have a market value schedule that follows the same classes as the special appraisal schedule. The choice

will depend on local market conditions and on the feasibility of a schedule approach. Often a market value schedule considers the size of the tract and its location, rather than its land classification or agricultural use.

Assuming a market schedule based on use classifications is appropriate, appraisers should apply the appropriate market value schedule to the number of acres in each land class. If the market value schedule reflects $500 per acre for Irrigated Cropland I, $300 per acre for Dry Cropland I and $200 per acre for Native Pasture, the calculation of market value would be as follows:

Land Class	Number of Acres		Market Value		Total Market Value
Irrigated Cropland I	160	x	$ 500	=	$ 80,000
Dry Cropland I	300	x	300	=	$ 90,000
Native Pasture	180	x	200	=	$ 36,000
Total	640				$ 206,000

A WORD ABOUT FEDERAL FARM PROGRAMS

The federal government aids the agricultural industry through direct grants, low-interest loans, commodity subsidies, and a variety of other measures. In some cases, participation in these programs affects the agricultural productivity value of farm and ranch land. This portion of the manual summarizes the federal subsidy programs that were most common during the mid-1980s and gives information about whether—and how—to adjust net to land calculations to account for federal financial aid.

The two main programs are called the Conservation Reserve Program and "deficiency payments." The Conservation Reserve Program (CRP) provides a ten-year payment in exchange for removing land from agricultural production. Deficiency payments provide an income subsidy based on the USDA-announced target price.

The Conservation Reserve Program

The Conservation Reserve Program (CRP) began in 1985. The program removes land from agricultural production to reduce farm surpluses. Under CRP, the federal government makes a 10-year contract with the property owner. The owner takes the land out of production and plants ground cover to deter erosion and support wildlife. The owner may lease the land for hunting but cannot allow any grazing, harvesting, or other commercial use of any crop from the land covered by the contract.

In return for participation, the federal government makes an annual payment to the property owner. The amount per acre depends on a bid price determined in the original contract. However, no owner can receive more than $50,000 per year.

Normally, a maximum of 25 percent of any county's total agricultural land may be placed in the CRP. That ceiling can sometimes be exceeded if putting more acreage in the program will not adversely affect the local economy.

Since Section 23.51 of the Code defines agricultural use to include "leaving land idle for the purpose of participating in any governmental program," CRP land can qualify for agricultural appraisal under Sec. 1-d-1. On the other hand, CRP acreage may not receive a special appraisal under the old Section 1-d. Section 23.42 of the Property Tax Code (implementing 1-d) requires that an owner intend to use land for agriculture as an occupation or business venture for profit during the current year. The CRP program is an incentive to not use land for agriculture. There is no way to reconcile these differences; as a result, an owner may not receive 1-d status for his CRP land.

CRP land should be placed in the land class the property was in before it qualified as CRP land. The agricultural use – as well as the principal use – of CRP land is participation in a government program. Although the land is planted with ground cover, it is not in production. The only evidence of the land's classification is the property's land class before it qualified for the CRP program.

Since CRP payments aren't based on farm production, they should not be considered in calculating a net to land—no matter how typical CRP participation may be in the area. CRP land should simply receive the per acre value of other land within its land class.

Deficiency Payments

Deficiency payments are a widely used farm subsidy. About 20 percent of all Texas cropland qualified for deficiency payments in 1986. A deficiency payment is paid whenever the national average market price for a commodity produced in any one crop year falls below the USDA-announced target price for that commodity for that year.

The amount of deficiency payment per unit of proven yield is limited to the difference between the target price and the higher of the national average price or the Commodity Credit Corporation loan price. Beginning with the 1987 crop year, the total deficiency payment per farmer is limited to $250,000. Prior to that year, the payment was potentially unlimited.

Landowners receiving deficiency payments can qualify their property under either 1-d or 1-d-1. The land itself is still being used for agricultural production—the only difference is another source of income for the commodity.

Unlike a CRP payment, a deficiency payment is attributable to the land's productivity. Appraisers should include deficiency payments in the calculation of gross income when such payments are typical in an agricultural class.

Whether an individual property owner actually received a deficiency payment in any given year does not matter. If an average owner exercising ordinary prudence would have received deficiency payments during the five-year period, the payment income must be included.

Other Federal Programs

Congress is likely to enact new forms of farm subsidies in the coming years. Amendments to this manual will acknowledge significant changes in federal financial aid. Until then, a chief appraiser should review each program carefully to determine whether it affects local productivity value for agricultural lands.

Future subsidies may not reach all classes of land and certainly will not reach all property owners within a specific class. A good rule-of-thumb to use is that the income from a federal subsidy will affect a class' net to land only when the program subsidizes production.